

## A NEW SPECIES OF CRAMBUS FABRICIUS FROM CHINA (LEPIDOPTERA, PYRALIDAE, CRAMBINAE)

CHEN Tie Mei<sup>1, 2</sup>, SONG Shi Mei<sup>1</sup>, YUAN De Cheng<sup>1\*</sup>

1. Institute of Zoology, Chinese Academy of Sciences, Beijing 100080, China

2. Laboratory of Quantitative Vegetation Ecology, Institute of Botany, Chinese Academy of Sciences, Beijing 100093, China

**Abstract** A new crambid species, *Crambus neopascuellus* sp. nov. from China is described and illustrated. Comparison with *Crambus pascuellus* (Linnaeus, 1758), the genus type species, is provided.

**Key words** Pyralidae, Crambinae, *Crambus*, new species.

The genus *Crambus* was erected by Fabricius, 1798 for 62 species, only some of which were subsequently left in *Crambus*. Curis (1826) mentioned that *Tinea pascuella* Linnaeus is the type species of *Crambus*. Bleszynski systematically reviewed the genus for Europe (Bleszynski, 1957) and Palaearctic Region (Bleszynski, 1965), with 29 species recorded in China (Bleszynski, 1962, 1965). The genus was divided into 11 groups based on the genitalia (Bleszynski, 1957). We recently reviewed the genera *Pseudocatharylla* Bleszynski (Chen *et al.*, 2002a), *Classeyia* Bleszynski (Chen *et al.*, 2002b) and other 10 genera from China. In reviewing the genus *Crambus*, we found a new species from South East China that belongs to the *C. pascuellus* group, and described it here.

The type series of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing (abbreviated as IZAS below). The terminology follows Bleszynski (1957).

*Crambus neopascuellus* sp. nov. (Figs. 1-4)

**Adult.** Similar to *Crambus pascuellus* (Linnaeus). Wingspan 21–25 mm ( $n = 56$ ). Vertex white. Frons slightly convex, rounded, white. Antenna yellowish brown, in male serrate, in female setaceous. Labial palpus white, three times as long as diameter of eye in male, four times as long as diameter of eye in female, yellowish at the base. Maxillary palpus white. Forewing: ground colour dull white, suffused with yellow and brown scales; basal stripe snow white; two subterminal fasciae yellowish brown, nearly parallel to each other, bending into one angle to termen; below

apex with a triangular white spot with yellowish brown center; with four black marginal spots; cilia golden brown, with metallic luster below apex, distinctly white. Hindwing ochreous, cilia white. Thorax and tegula light brown. Abdomen ochreous.

**Male genitalia** (Fig. 1). Uncus bilobed, long and narrow, each part with long developed bristles. Gnathos narrow, pointed at apex. Valva with cucullus narrowly rounded apically. Costal arm strongly developed, narrow, curved inward, the same length as that of valva. Apex of sacculus ending in a slender recurved prong. Juxta (Fig. 2) oblong, with two arms protruded upwards. Aedeagus (Fig. 3) is equal the rest of the genitalia in length, vesica without cornutus.

**Female genitalia** (Fig. 4). Ductus brusae lightly sclerotized, short, without loops, straight. Bursa copulatrix oblong, with two asteroid signa.

**Material examined.** Holotype ♂, Mt. Huanggang (27°48' N, 117°42' E), 2150 m, Mt. Wuyi, Fujian Prov., 26 July 2000, coll. SONG Shi-Mei, genitalia slide no. C1524 IZAS. Paratypes, 51 ♀♀, 4 ♂♂, same data as holotype, genitalia slide nos. C1501 IZAS, C1502 IZAS, C1500 IZAS, C1319 IZAS, C1506 IZAS and C1525 IZAS.

**Distribution.** Fujian.

**Biology.** The species was collected with light trap on the top of the Mt. Huanggang, at 2150 m in elevation, where vegetation type is a subalpine meadow, dominated by Poaceae.

**Etymology.** The species' name refers to the similarity with *C. pascuellus* in external features and shape of the male genitalia.

The project was supported by a Grant for Systematic and Evolutionary Biology, CAS and part by the Ministry of Science and Technology, PRC (0246019B).

\* Corresponding author, E-mail: yuandc@ioz.ac.cn

Received 29 Dec. 2004, accepted 20 Jan. 2005.



Figs 1-4. *Crambus Neopascuellus* sp. nov. 1. Male genitalia, ventral view. 2. Juxta, ventral view. 3. Aedeagus, lateral view. 4. Female genitalia, ventral view. Scale bars = 0.5 mm.

**Remarks.** The species is quite similar to the generic type species *C. pascuellus* (materials examined: 1 ♀, Daling, 390 m, Heilongjiang Prov., 27 July 1963, genitalia slide no. C640 IZAS; 1 ♂, same locality, 18 July 1958, genitalia slide no. C729 IZAS; 1 ♀, same locality, 6 July 1958, genitalia slide no. C1522 IZAS; 1 ♂, Italy, genitalia slide no. C1534 IZAS) in external features and male genitalia, but it can be distinguished from the latter by the following characters: the uncus is longer and its two lobes narrower, the apex of sacculus ends with a slender recurved prong, and the cucullus is narrowly rounded. In *C. pascuellus*, the bilobed uncus is nearly triangular, the apex of sacculus ends with a thick sharp prong, and the cucullus is broadly rounded. So far, this new species might be the known species most closely related species to *C. pascuellus*, both having a bilobed uncus with long bristles on each lobe, the costa of valva with a long and narrow projection and the sacculus with a rather short projection.

In addition, Bleszynski (1957: 204) used the term “uncus” to describe the genital sclerite which is linked behind the tegument in *C. pascuellus*, while he reported the same structure using “gnathos” on the other page (p. 206) of the same publication. We are not sure if it was due to an editorial error or his various interpretations of the genital structure. Based on the

specimens examined, we suggest that the bilobed structure is the uncus, not the gnathos.

**Acknowledgments** We are indebted to J. B. Heppner, editor of *Tropical Lepidoptera* and Mr. Sherr Horn Yen, Sun Yat sen University of Taiwan and Dr. Bernard Landry, now in the Museum d'Histoire Naturelle, Switzerland for reviewing the paper.

## REFERENCES

- Bleszynski, S. 1957. Studies on the Crambidae (Lepidoptera) Part XIV. Revision of the European species of the generic group *Crambus* F. s. l. *Acta Zool. Cracov.*, 6: 161-622.
- Bleszynski, S. 1962. A short catalogue of the world species of the family Crambidae (Lepidoptera). *Acta Zool. Cracov.*, 7: 197-389.
- Bleszynski, S. 1965. Crambinae. In: Amsel, H. G., Reisser, H. and Gregor, F. (eds.), *Microlepidoptera Palaearctica*. Verlag Georg Fromme & Co., Wien. 553 pp.
- Chen, T-M, Song, S-M and Yuan, D-C 2002a. A taxonomic study on the Chinese species of the genus *Pseudocatharylla* Bleszynski (Lepidoptera: Pyralidae: Crambinae). *Acta Zootaxonomica Sinica*, 27 (2): 338-343. [动物分类学报]
- Chen, T-M, Song, S-M, Yuan, D-C and Zhang, G-X 2002b. A taxonomic study on the Chinese species of the genus *Classeya* Bleszynski from China (Lepidoptera: Pyralidae: Crambinae). *Acta Zootaxonomica Sinica*, 27 (3): 572-575. [动物分类学报]
- Curtis, J. 1826. *British Entomology: Being Illustrations and Descriptions of the Genera of Insects Found in Great Britain and Ireland*. R. Taylor, London. Vol. 3, Fascicles 99-146.
- Fabricius, J. C. 1798. *Supplementum Entomologiae Systematicae*. Hafniae, 572 pp.

中国草螟属一新种（鳞翅目，螟蛾科，草螟亚科）

陈铁梅<sup>1,2</sup> 宋士美<sup>1</sup> 袁德成<sup>1</sup>

- 1. 中国科学院动物研究所 北京 100080
- 2. 中国科学院植物研究所植被数量生态学重点实验室 北京 100093

摘 要 描述了中国草螟属 1 新种——新牧草螟 *Crambus neopascuellus* sp. nov.，给出了新种与该属模式种牧草螟 *Crambus pascuellus* (Linnaeus, 1758) 的比较。模式标本保存在中国科学院动物研究所标本馆。

关键词 鳞翅目，螟蛾科，草螟亚科，草螟属，新种.

中图分类号 Q969.432.8